1	IV.	THE INTRODUCTION OF COMPETITION ESTABLISHES THE REQUIREMENT
2		FOR ECONOMIC LIVES
3		
4	Q.	WHAT COMPETITIVE EVENTS HAVE TRANSPIRED SINCE THE PRESCRIPTION
5		OF THE FCC LIVES THAT RENDER THEM OUTDATED FOR USE IN A COST
6		MODEL?
7	A.	Since the FCC ranges were established, numerous competitors have requested permission
8		to provide local exchange services in GTE's operating territory. In Nebraska specifically,
9		GTE has entered into an interconnection agreement with Aliant Communications' CLEC,
10		Aliant Midwest. We are negotiating with Aliant Midwest over collocation in our central
11		office in Kearney, and they have tendered payment for access to our rights of way. Aliant
12		Midwest is currently marketing its services to the University of Nebraska at Kearney, one
13		of GTE's largest Nebraska customers.
14		
15		In AT&T's announcement outlining its refocused strategy, AT&T Chairman C. Michael
16		Armstrong stated:
17 18 19		AT&T is actively pursuing alternative technologies for providing local service, including mobile spectrum, fixed wireless, broadband cable and power transmission. ⁵
20		GTE may also face the threat of emerging facilities-based technologies such as Wireless
21		Fiber from WinStar. As noted in a recent Wall Street Journal article:

⁵AT&T Company Press Release, January 26, 1998

1 2 3		WinStar and other wireless service companies could offer the giant Bell companies and GTE Corp. their most meaningful competition in luring away phone customers to alternative local services on a massive scale. ⁶
4		
5		From another recent Wall Street Journal article, the following comments by Alex J. Mandl,
6		former AT&T President and now Chairman and CEO of Teligent Inc.:
7		
8 9 10		It is no accident that the company AT&T decided to buy to jump-start its entry into local markets was Teleport Communications Group, one of the largest of the new facilities-based local competitors.
11 12 13 14		Companies like Teligent, Winstar, and BizTel (now owned by Teleport) today are delivering new broad-band services with technology that was not available even a year or two ago. ⁷
16 17		Real competition is coming to the local telephone market.
18 19		These competitive threats warrant re-examination of depreciation lives.
20	0	COULD YOU PROVIDE AN EXAMPLE OF HOW A CUSTOMER COULD LEAVE
20	Q.	COULD TOO PROVIDE AN EXAMPLE OF HOW A CUSTOMER COULD LEAVE
21		GTE'S WIRELINE NETWORK FOR A COMPETITOR'S NETWORK?
22	A.	Yes. In February 1997, AT&T announced the invention of a revolutionary fixed wireless
23		technology, termed "Project Angel", to carry high-speed digital communications to most
24		households across the country at many times the capacity of traditional copper wire. This

⁶Wall Street Journal, November 10, 1997, page B6.

⁷Wall Street Journal, January 28, 1998, page A18.

technology will give AT&T a new option for competing to provide local service over its own facilities. This option would completely bypass the ILEC's existing network, especially the copper cable distribution network. Even though AT&T is still in the trial phase of this project, other providers are building and implementing local wireless technology on a national scale.

Wireless providers, such as WinStar and Teligent, are building full-service, national local switched telephone networks that can broadcast fiber quality service over fixed wireless connections. Wireless fiber services offer high speed, digital voice and data transmissions. These services provide high quality, reliable, wireless circuits that take the place of existing fiber optic and copper communications lines. This fixed wireless technology, in conjunction with a provider's own switch, could completely bypass the ILEC's existing network.

Also, in March 1997, MCI announced that it was forming a partnership with Northwest Iowa Telephone and Northwest Iowa Power Cooperative to form Pioneer Holdings to deliver an integrated array of competitively priced, cutting edge products and services to homes and businesses through local distribution networks. The MCI press release stated that Pioneer was in active negotiations with over 300 municipalities in 10 states and intended to continue to expand in the region. This type of partnership could completely bypass the ILEC's existing network.

1	V. PROPER WEIGHT IS GIVEN TO ALL FACTORS CONSIDERED IN THE		
2		DETERMINATION OF AN ECONOMIC LIFE	
3			
4	Q.	WHAT FACTORS SHOULD BE CONSIDERED WHEN ESTIMATING THE	
5		ECONOMIC LIFE OF AN ASSET?	
6	A.	The methodology that GTE uses to estimate economic lives of assets should also be used by	
7		this Commission. When estimating economic lives, GTE (a) evaluates the criteria that are	
8		used to establish the retirement lives of assets as a guideline for estimating economic lives	
9		(b) benchmarks GTE's selected lives with the lives used by other telecommunications	
10		providers, the lives prescribed by the FCC, and pertinent studies conducted by Technology	
11		Futures, Inc. ("TFI"), and (c) considers the effect that the evolving competitive market will	
12		have on the economic lives of many of GTE's assets.	
13			
14	Q.	WILL YOU PLEASE DESCRIBE THESE FACTORS?	
15	A.	GTE first considers the National Association of Regulatory Utility Commissioners'	
16		("NARUC") description of factors that cause property to be retired.8 These include:	

⁸<u>Public Utility Depreciation Practices</u>, National Association of Regulatory Utility Commissioners, 1996, p. 15.

1	I. F	Physical Factors
2 3	a	Wear and tear
4	b	
5	C	
6	_	
7	2. F	Functional Factors
8		
9	а	. Inadequacy
10	b	Obsolescence
11	c	Changes in art and technology
12	d	
13	e	1
14	f	. Management discretion
15		
16	3.	Contingent Factors
17		
18	a	
19	b	Extraordinary obsolescence
20		
21	While the NARUC factor	ors have traditionally been used to establish the retirement or physical
22	life expectancy of asse	ts in the telecommunications industry, GTE believes these same
23	factors can be used to he	elp estimate an asset's economic life. GTE uses the NARUC factors
24	as a guideline for choos	ing economic lives of certain of its assets, but only after allocating
25	proper weighting to the	hose factors that reflect the significant roles competition and
26	technological change pl	ay in determining an asset's economic life.9

⁹It is important to note that simply because the NARUC factors are also used to determine an asset's book retirement ("book life"), an asset's book life is not necessarily the same as an asset's economic life. Plant investment may remain on the books without having any remaining economic life.

Specifically, the "Functional Factors" (Part 2 of the NARUC factors) are sensitive to competition and technological change and are given substantially greater weight when GTE considers the NARUC criteria in establishing the economic lives of GTE's assets. The effect that competition and technological change will have on an asset's economic life cannot be ignored.

VI. ECONOMIC LIVES MUST BE USED IN COST STUDIES AND IN REGULATED DEPRECIATION EXPENSE BOOKING

- Q. DID GTE USE THIS APPROACH TO DEVELOP ECONOMIC LIVES FOR USE IN THE COST STUDIES BEING SUBMITTED BY GTE IN THIS CASE?
- 12 A. Yes. The following list reflects the economic lives that GTE has estimated for various assets:

14		<u>Table 1</u>
15		Economic Lives For GTE
16		Economic Lives
17	Digital Switching	10
18	Circuit Equipment	8
19	Poles	25
20	Copper Cable	
21	Aerial	15
22	Underground	15
23	Buried	15
24	Fiber Cable	
25	Aerial	20
26	Underground	20
27	Buried	20
28	Conduit	40

This list reflects the economic lives of assets that are most subject to change in a competitive and technologically evolving environment. Establishing the proper economic lives for these assets is critical to determining economic depreciation in a forward-looking cost study. Economic lives of other assets are used in GTE's cost studies, but the changes in those assets' economic lives (e.g., motor vehicles) as compared to the prescribed lives are extremely small and have little impact on the depreciation rates for those assets.

Α.

Q. HOW DID YOU ARRIVE AT THE GTE ECONOMIC LIVES?

We started with the NARUC factors previously discussed. It has long been recognized in the industry that traditional methods for determining lives for accounts affected by technology and competition were not adequate. Most commissions, including this Commission, made adjustments to the physical life indications produced by historical mortality analysis. GTE, also recognizing that traditional methods were not adequate, attempted to develop an economic life model as early as the mid-1980's. However, it was soon evident that in a competitive environment, GTE could not operate in a vacuum. GTE began to look at industry forecasts to help quantify the appropriate lives for the GTE assets that would be most impacted by technology and competition. In the course of transitioning from the sole provider environment to the competitive environment, customer demand and competitors' plans must also be considered. To help quantify our professional judgement as to the appropriate lives for telephone plant, GTE reviewed industry studies performed by TFI, including a GTE-specific analysis, entitled "Technology Forecasts For GTE Telephone Operations." We then used these lives as a "reasonableness" benchmark comparison with

the lives used by other companies, both regulated and non-regulated, with similar types of
telecommunications assets.

3

4 Q. WHAT DO THE TFI STUDIES RECOMMEND AS THE ECONOMIC LIVES FOR GTE'S

5 ASSETS?

A. The chart below compares TFI's recommended economic life ranges with the economic lives

GTE uses in its cost studies.¹⁰

8

6

7

Table 2

A Comparison of The TFI Ranges with GTE's Proposed Economic Lives

10 11		TFI <u>Economic</u>	GTE Economic
12	Digital Switching Equipment	9-12	10
13	Circuit Equipment	8	8
14	Poles		25
15	Copper Cable		
16	Aerial	14-20	15
17	Underground	14-20	15
18	Buried	14-20	15
19	Fiber Cable		
20	Aerial	20	20
21	Underground	20	20
22	Buried	20	20
23	Conduit		40

24

25

26

27

TFI specifically addresses the appropriate lives to be used for outside plant cable, central office switching, and circuit equipment accounts, as these are the accounts that are most affected by changes in competition and technology.

¹⁰Transforming the Local Exchange Network: Analyses and Forecasts of Technology Change, Larry K. Vanston, Ray L. Hodges, and Adrian J. Poitras, Second Edition 1997, Technology Futures, Inc., p. 33.

<u>VII. GTE'S RECOMMENDED LIVES ARE REASONABLE WHEN BENCHMARKED</u> <u>WITH OTHER TELECOMMUNICATIONS PROVIDERS</u>

3

1

2

- 4 Q. DID YOU DO ANY BENCHMARK COMPARISONS OTHER THAN TFI RANGES?
- 5 A. Yes. We also benchmarked against the lives used by AT&T, MCI, and CATV operators, as
- 6 well as the Regional Bell Operating Companies ("RBOCs")

7

- 8 Q. WHAT DID YOU DETERMINE USING BENCHMARK COMPARISONS WITH AT&T?
- A. Comparing the economic lives proposed by GTE to the lives AT&T uses affords an excellent example of the reasonableness of GTE's economic lives. In fact, GTE's lives are not as short as the lives used by AT&T.¹¹

12

13

Table 3 Comparison of AT&T's Economic Lives with GTE's

14 15		AT&T's Economic Life	GTE's Proposed Economic Life
16	Digital Switching	9.7	10.0
17	Digital Circuit Equipment	7.2	8.0
18	Copper Cable		
19	Aerial	3.4	15.0
20	Underground	9.0	15.0
21	Buried	15.0	15.0
22	Fiber Cable		
23	Aerial	20.0	20.0
24	Underground	20.0	20.0
25	Buried	20 .0	20.0

¹¹FCC Docket No. 95-32, <u>In the Matter of the Prescription of Revised Percentages of Depreciation</u>, Memorandum Opinion and Order, released January 31, 1995.

Likewise, the lives used by AT&T for support asset accounts such as motor vehicles.
furniture, office and work equipment are also shorter than the lives proposed by GTE.
AT&T uses 6.6 years for motor vehicles, GTE proposes 8 years. AT&T uses 6.7 - 8.2 years
for work equipment, GTE proposes 10 years. AT&T uses 4.7 - 9.3 years for office
equipment, GTE proposes 10 years. AT&T uses 5.6 years for furniture, GTE proposes 10
years.

Q. WHAT WAS DETERMINED BY THE COMPARISON WITH MCI?

A. GTE's lives are not as short as the lives used by MCI. Page 16 of MCI's 1996 annual report stated:

The weighted average depreciable life of the assets comprising the communications system in service approximates 10 years. Furniture, fixtures and equipment are depreciated over a weighted average life of 6 years ... Buildings are depreciated using lives of up to 35 years.¹²

GTE's proposed lives are longer or similar to the lives used by MCI. GTE proposes 10 years for switching and 15-20 years for cable compared to MCI's 10 years. GTE proposes 10 years for support assets such as furniture and equipment compared to MCI's 6 years. GTE proposes 30 years for buildings compared to MCI's up to 35 years.

¹²MCI 1996 Annual Report, page 16.

Q. WHAT WAS DETERMINED BY THE COMPARISONS TO LIVES USED BY THE CATV OPERATORS?

A. GTE's lives are not as short as the lives used by CATV operators. The FCC adopted a flexible range of lives to be used by CATV operators seeking to justify depreciation rates in cost of service filings.¹³ The useful lives adopted for distribution facilities was 10 to 15 years. This range was developed from a statistical analysis of lives used by CATV operators for their own facilities. The 15 year economic life for copper cable and the 20 year life for fiber cable selected by GTE are not as short as the lives within the FCC allowed range for CATV distribution facilities. Additionally, the lives proposed by GTE for support assets such as office furniture and equipment, vehicles, and buildings are reasonable when compared to the FCC allowed ranges for CATV operators. The FCC range for office furniture and equipment is 9-11 years which compares favorably to GTE's proposal of 10 years for these accounts. The FCC range for vehicles and equipment is 3-7 years, which is shorter than GTE's proposal of 8-10 years. The FCC range for buildings is 18-33 years which compares favorably with GTE's proposal of 30 years.

¹³FCC MM Docket No. 93-215, <u>In re Implementation of Sections of the Cable Television Consumer Protection and Competition Act of 1992: Rate Regulation</u> and FCC CS Docket No. 94-28, <u>In re Adoption of a Uniform Accounting System for Provision of Regulated Cable Service</u>, Second Report and Order, First Order on Reconsideration, and Further Notice of Proposed Rulemaking, released January 26, 1996.

- Q. ARE THE ECONOMIC LIVES RECOMMENDED BY GTE SIMILAR TO THE ECONOMIC LIVES IDENTIFIED BY THE RBOCs?
- A. Yes. The RBOCs' economic lives are, like GTE's, within the ranges identified by TFI. The following table compares the lives the RBOCs published in their FAS-71 announcements:

5

A Comparison of Economic Lives Used By GTE and RBOCs

7 8		Copper <u>Cable</u>	Digital Switching	Circuit Equipment	Fiber <u>Cable</u>
9	GTE	15	10	8	20
10	Pacific Bell	14	10	8	20
11	U. S. West	15-20	10	10	20
12	Ameritech	15	provi	7	15
13	Bell South	12-14	10	9	20
14	Bell Atlantic	14-19	12	9-11	20-25
15	NYNEX	15-17	12	8	20
16	SBC	18	11	7	20

- Q. HAVE ANY OTHER COMMISSIONS DETERMINED THAT BENCHMARKING IS A
 VIABLE METHOD TO ASSESS THE REASONABLENESS OF GTE'S PROPOSED
 LIVES?
- 21 A. Yes. The Missouri Public Service Commission recently commented on benchmarking for 22 purposes of establishing depreciation rates to be utilized in GTE's TELRIC cost studies as 23 follows: "Staff believes that benchmarking GTE TELRIC rates against those booked for 24 financial purposes of likely competitors and other companies using similar technologies is 25 appropriate and is the best method to determine if GTE's TELRIC rates pass the muster of

reasonableness."¹⁴ Staff chose 19 of the largest IXC, CATV, cellular, CAP, and PCS companies to benchmark against and found that the depreciation rates used in calculation of GTE TELRIC rates were at the bottom or second from the bottom of the list and were significantly lower than several companies in similar industries. "This is the most significant factor to Staff's belief that GTE's proposed depreciation rates are reasonable."¹⁵

VIII. GTE'S ECONOMIC LIVES HAVE BEEN ENDORSED BY OTHER STATE REGULATORY COMMISSIONS

- Q. HAS ANY OTHER REGULATORY BODY APPROVED THE ECONOMIC LIVES PRESENTED HERE?
- A. Yes. The California Public Utility Commission ("CPUC") endorsed the use of the same economic lives presented here, except that the life approved for copper cable is one year less than requested here. These lives were ordered to be used in a recent cost study ruling. ¹⁶ The CPUC concluded that the economic lives used by GTE and Pacific Bell for external financial reporting were the appropriate forward-looking lives for cost studies. The CPUC rejected the suggestion by AT&T and others that FCC-prescribed lives are forward-looking.

¹⁴See Case No. TO-97-63, Missouri Public Service Commission Final Arbitration Order, Issued July 31, 1997, Attachment C at p. 77.

¹⁵<u>Id</u>., p. 79.

¹⁶California Public Utilities Commission Decision, No. D.96-08-021, Adopted August 2, 1996, in Rule Making R.93-04-003, I.93-04-002.

Q. WHAT DID THE CPUC SAY ON THIS ISSUE IN THAT PROCEEDING?

A. In its decision, the CPUC commented as follows:

We agree with Pacific that the schedules formally adopted in the represcription proceeding reflect the previous paradigm of the regulated monopoly environment, and so are difficult to justify in a cost study that looks forward to an environment in which there is local exchange competition. We also see little merit in the Coalition's original suggestion that we use FCC schedules. These schedules also reflect "the previous paradigm;" moreover, they are based on different assumptions and applied in different ways than our own.¹⁷ It also seems to be the case, however, that Pacific is now using these schedules in financial reports it is required to file, and thus for purposes of these cost studies, the schedules also appear consistent with generally accepted accounting principles. The schedules also appear realistic for a firm having to operate in a competitive environment, as Pacific will soon have to do. Accordingly, we will approve their use in this proceeding.¹⁸

- Q. DOES GTE USE "ECONOMIC LIVES" IN THE CALIFORNIA COST STUDIES?
- 17 A. Yes. The CPUC ordered GTE to use economic lives as well:

We find GTEC's arguments to be persuasive, and will therefore order GTEC to modify the depreciation rates used in the cost studies it has submitted only to the extent of the eight technology accounts...¹⁹

- Q. HAS THE USE OF ECONOMIC LIVES BEEN ENDORSED IN OTHER STATE
- 23 PROCEEDINGS?
- 24 A. Yes. Both the Michigan and Missouri Public Service Commissions have adopted GTE's
- recommended economic depreciation parameters.

¹⁷<u>Id.</u>, page 52. The Coalition mentioned in this passage includes AT&T, MCI, California Cable Television Association, California Association of Long Distance Carriers, and others.

¹⁸<u>Id.</u>, page 52. GTE is also using economic lives for financial reporting.

¹⁹<u>Id</u>., page 75.

1	
2	The Missouri Public Service Commission adopted the economic lives presented in this case
3	stating:
4	Staff's goal has been to recommend depreciation rates based on parameters that GTE
5	is likely to experience for financial purposes so as to fully recover its long run capital
6	costs in a timely fashion. ²⁰
7	
8	The Michigan Commission Staff also recommended that the Michigan Public Service
9	Commission adopt GTE's proposed economic lives, stating:
10	In reviewing the recommendations on these issues of both AT&T and GTE, Staff
11	believes the depreciation lives proposed by GTE more closely match the forward
12	looking costs Staff has suggested earlier and are reasonable. ²¹
13	
14	The Michigan Public Service Commission adopted the Staff recommendation and approved
15	the use of GTE's economic lives on February 25, 1998, stating:
16	GTE proposes to reduce its asset lives in accordance with their economic lives The
17	Staff's view is that GTE's proposed asset lives are largely consistent with a forward-
18	looking approach and are reasonable The Commission finds that GTE's proposal
19	related to depreciation is appropriate for TSLRIC purposes The Commission
20	further finds AT&T/MCI's proposal to be insufficiently forward looking for purposes
21	of a TSLRIC study. ²²

²⁰See Case No. TO-97-63, Missouri Public Service Commission Final Arbitration Order, issued July 31, 1997, Attachment C at p. 76.

²¹Case No. U-11281, March 31, 1997, MPSC Staff's comments.

²²Michigan Docket No. U-11281, Order 2/25/98, Section d.

IX. FCC DEPRECIATION RANGES ARE OUTDATED

3	Q.	ARE THE FCC DEPRECIATION RANGES FORWARD-LOOKING?
4	A.	No. As a result of the passage of the Act, the FCC's prescribed lives are outdated, in need
5		of revision, and consequently cannot be considered forward-looking or reasonable in today's
6		telecommunication's environment. They were developed from a statistical sampling of lives
7		prescribed by the FCC in the early 1990's. Even the Federal-State Joint Board has
8		recommended depreciation lives significantly shorter than the outdated FCC ranges. The
9		FCC has listed depreciation as an item for possible elimination in the 1998 biennial review.
10		FCC Commissioner Furchgott-Roth has referred to the FCC depreciation procedures as relics
11		and outdated, and has urged the Commission to eliminate its rules and regulations regarding
12		depreciation.
13		
14	Q.	WHEN WERE THE FCC DEPRECIATION RANGES DEVELOPED?
15	A.	The FCC ranges were developed from a statistical sampling of lives prescribed in the 1990 -
16		1994 timeframe, prior to the introduction of the Act. They are outdated and can hardly be
17		construed as forward-looking in 1998.
18		
19	Q.	WHAT HAS THE FEDERAL-STATE JOINT BOARD RECOMMENDED FOR
20		DEPRECIATION LIVES?
21	A.	The Federal-State Joint Board has recommended depreciation lives that are significantly
22		shorter than the current FCC ranges: 18 years for copper cable, 14 years for digital switching,

*		and 10 years for circuit equipment. ²³ This is of particular interest because the FCC stated
lens Sale		that:
3 4 5		We will seek the Joint Board's assistance in developing our method of calculating forward-looking economic cost ²⁴
6	Q.	DOES THE FCC RECOGNIZE THAT ITS DEPRECIATION PROCEDURES NEED
7		REVISION?
8	A.	Yes. The FCC recognizes that its depreciation rules need to be re-examined to reflect the
9		post-Act telecommunications operating environment, and has stated:
10 11 12		We intend shortly to issue a notice of proposed rule making to further examine the Commission's depreciation rules. ²⁵
13		In yet another order, the FCC stated:
14 15 16 17		We reach no decision in this Order on the possible use of "economic" depreciation methods in general The telecommunications industry is evolving, and this evolution may well require us to revise our prescription methods, or possibly discontinue depreciation rate prescriptions altogether. ²⁶
19	Q.	HAS THE FCC IDENTIFIED DEPRECIATION AS AN ITEM FOR POSSIBLE
20		ELIMINATION?
21	A.	Yes. The FCC Commission Staff has released a list of proposed proceedings to be initiated
22		as part of the 1998 biennial review. The review is aimed at eliminating or modifying

²³CC Docket No. 96-45, April 23, 1997

²⁴FCC 97-157, para. 249

²⁵FCC Order 97-157 adopted May 7, 1997, page 140.

²⁶FCC Order 96-262, adopted May 21, 1997

1		regulations that are overly burdensome or no longer serve the public interest. Depreciation
2		has been identified as an item that the Commission will consider for elimination In this
3		review. ²⁷
4		
5	Q.	HAS AN FCC COMMISSIONER COMMENTED ON THE ELIMINATION OF THE
6		FCC'S DEPRECIATION PRACTICES?
7	A.	Yes. In a statement issued on January 30, 1998, FCC Commissioner Harold Furchtgott-Roth
8		stated:
9 10 11 12 13 14		In today's increasingly competitive environment, there should be no need for the Commission to continue to dictate, even through revised streamlined procedures, depreciation rates or the factors that may be used to compute such rates I urge, and specifically encourage parties to request, that the Commission use this year's biennial review to eliminate its rules and regulations regarding depreciation expenses ²⁸
15		X. CONCLUSION.
16		
17	Q.	PLEASE SUMMARIZE YOUR TESTIMONY
18	A.	Traditional historical methods of establishing depreciation lives are not forward-looking.
19		The lives used in GTE's cost studies are based on a forward-looking approach. GTE's
20		proposed lives are reasonable in comparison to the financial reporting lives of CATV

²⁷FCC Report No. GN 98-1, released February 5, 1998.

²⁸FCC Order 98-11, adopted January 30, 1998 by the Commission, Commissioner Furchtgott-Roth issuing a separate statement.

- operators and other telecommunications providers that operate in Nebraska, such as USWest,
- 2 AT&T, and MCI.
- 3
- 4 Q. DOES THIS CONCLUDE YOUR TESTIMONY?
- 5 A. Yes.

4 5

note: All accounts may not be applicable to Nebraska.

GTE ECONOMIC DEPRECIATION INPUT PARAMETERS

USOA	Account	GTE	Salvage
Account	Description	<u>Life</u>	Percent
2212	Motor vehicles	8	10
2113	Aircraft	5	50
2114	Special purpose vehicles	10	0
2115	Garage work equipment	10	0
2116	Other work equipment	10	0
2121	Buildings	30	0
2122	Furniture	10	0
21231	Office support equipment	10	0
21232	Company communications equipment	10	0
2124	General purpose computers	5	0
2212	Digital electronic switching	10	0
2220	Operator systems	10	0
2231	Radio systems	10	0
2232	Circuit equipment	8	0
2351	Public telephone terminal equipment	7	0
2362	Other terminal equipment	5	0
2411	Poles	25	-50
24211	Aerial cable - metallic	15	-10
24212	Aerial cable - nonmetal	20	-10
24221	Underground cable - metallic	15	-10
24222	Underground cable - nonmetal	20	-10
24231	Buried cable - metallic	15	-10
24232	Buried cable - nonmetal	20	-10
24241	Submarine cable - metallic	15	-10
24242	Submarine cable - nonmetal	20	-10
24251	Deep sea cable - metallic	15	-10
24252	Deep sea cable - nonmetal	20	-10
24261	Intrabuilding cable - metallic	15	-10
24262	Intrabuilding cable - nonmetallic	20	-10
2423	Aerial wire	15	-10
2441	Conduit systems	40	-10

Exhibit 3

Pennsylvania HAI 5.0a Difficult Terrain Sensitivity Runs

		Loop Cost per line per month			1	
						1
					ł	% diff from
<u></u>	Sensitivity	GTE	Contel	Quaker	Combined	default
<u> </u>	5.0a Default	\$ 14.88	\$ 15.49	\$ 25.38	\$ 15.64	1
1	Rock Depth 12"	\$ 14.88	\$ 15.49	\$ 25.38	\$ 15.64	0.00%
2	Rock Depth 36"	\$ 14.88	\$ 15.49	\$ 25.38	\$ 15.64	0.01%
3	Hard Rock Multi 2.5	\$ 14.88	\$ 15.49	\$ 25.38	\$ 15.64	0.00%
4	Hard Rock Multi 4.5	\$ 14.88	\$ 15.49	\$ 25.38	\$ 15.64	0.00%
5	Soft Rock Multi 1.0	\$ 14.88	\$ 15.49	\$ 25.38	\$ 15.64	0.00%
6	Soft Rock Multi 3.0	\$ 14.88	\$ 15.49	\$ 25.38	\$ 15.64	0.00%
7	Dewatering Factor 0.1	\$ 14.88	\$ 15.49	\$ 25.38	\$ 15.64	0.00%
8	Dewatering Factor 0.3	\$ 14.88	\$ 15.49	\$ 25.38	\$ 15.64	0.00%
9	Water Table Depth 3'	\$ 14.88	\$ 15.49	\$ 25.38	\$ 15.63	-0.01%
10	Water Table Depth 7'	\$ 14.88	\$ 15.49	\$ 25.38	\$ 15.64	0.01%
11	Distr Cable Shift 0%	\$ 14.88	\$ 15.49	\$ 25.38	\$ 15.64	0.00%
12	Distr Cable Shift 100%	\$ 14.88	\$ 15.49	\$ 25.38	\$ 15.64	0.00%
13	Feeder Cable Shift 0%	\$ 14.88	\$ 15.49	\$ 25.38	\$ 15.64	0.00%
14	Feeder Cable Shift 100%	\$ 14.88	\$ 15.49	\$ 25.38	\$ 15.64	0.00%
15	Distr Diff Terrain Multi 1.25	\$ 15.18	\$ 16.30	\$ 26.62	\$ 16.05	2.63%
	Distr Diff Terrain Multi 1.50	\$ 15.47	\$ 17.13	\$ 27.83	\$ 16.45	5.23%
-	Surface Texture at 50%	\$ 14.85	\$ 15.43	\$ 25.27	\$ 15.60	-0.23%
	Surface Texture at 200%	\$ 14.94	\$ 15.61	\$ 25.60	\$ 15.71	0.47%
19	Surface Texture at 300%	\$ 14.99	\$ 15.72	\$ 25.82	\$ 15.78	0.93%

GT		Contel		Quaker		
	Number of		Number		Number	
Loop Cost	Lines	Loop Cost	of Lines	Loop Cost	of Lines	
\$ 94,842,146	531,076	\$ 12,155,028	65,397	\$ 12,826,298	42,113	
\$ 94,842,146	531,076	\$ 12,155,028	65,397	\$ 12,826,298	42,113	
\$ 94,849,891	531,076	\$ 12,158,477	65,397	\$ 12,826,298	42,113	
\$ 94,842,146	531,076	\$ 12,155,028	65,397	\$ 12,826,298	42,113	
\$ 94,842,146	531,076	\$ 12,155,028	65,397	\$ 12,826,298	42,113	
\$ 94,842,146	531,076	\$ 12,155,028	65,397	\$ 12,826,298	42,113	
\$ 94,842,146	531,076	\$ 12,155,028	65,397	\$ 12,826,298	42,113	
\$ 94,837,240	531,076	\$ 12,154,851	65,397	\$ 12,826,139	42,113	
\$ 94,847,052	531,076	\$ 12,155,204	65,397	\$ 12,826,458	42,113	
\$ 94,829,234	531,076	\$ 12,154,043	65,397	\$ 12,825,738	42,113	
\$ 94,847,468	531,076	\$ 12,155,568	65,397	\$ 12,826,515	42,113	
\$ 94,844,134	531,076	\$ 12,155,853	65,397	\$ 12,826,742	42,113	
\$ 94,841,473	531,076	\$ 12,154,755	65,397	\$ 12,826,054	42,113	
\$ 94,842,534	531,076	\$ 12,155,221	65,397	\$ 12,826,410	42,113	
\$ 94,842,134	531,076	\$ 12,155,103	65,397	\$ 12,826,186	42,113	
\$ 96,723,459	531,076	\$ 12,794,943	65,397	\$ 13,451,424	42,113	
\$ 98,583,289	531,076	\$ 13,443,472	65,397	\$ 14,062,428	42,113	
\$ 94,665,121	531,076	\$ 12,109,007	65,397	\$ 12,770,325	42,113	
\$ 95,195,613	531,076	\$ 12,247,715	65,397	\$ 12,937,863	42,113	
\$ 95,547,222	531,076	\$ 12,339,844	65,397	\$ 13,049,497	42,113	